

Amendments to the Claims

Listing of claims:

1. (original) Apparatus for cutting and stripping portions of covering layers from a filamentary workpiece having a central axis, said apparatus comprising:
 - a) clamping jaws for axially fixing the position of said workpiece;
 - b) a single blade with an opening surrounded by a circular cutting edge;
 - c) first motive means for moving said blade to cause said cutting edge to orbit said central axis;
 - d) a pair of gripping members having spaced, opposed, end portions at substantially equal distances on laterally opposite sides of said workpiece on the axially opposite side of said blade from said clamping jaws;
 - e) second motive means comprising first and second linear stepper motors respectively connected to said pair of gripping members for moving said gripping members radially of said workpiece between a first position, wherein said end portions are spaced from one another by a distance greater than the diameter of said workpiece, and a second position, wherein said end portions forcibly engage said covering layer; and
 - f) third motive means for moving said blade and said gripping members axially of said workpiece to strip the severed slug of said coating layer from said workpiece.

2. (original) The apparatus of claim 1 wherein said third motive means comprise a third linear stepper motor.

3. (original) The apparatus of claim 1 wherein said gripping members engage said workpiece at a position closely adjacent said cutting edge.

4. (original) The apparatus of claim 1 wherein said gripping members are metal and are at ground potential.

5. (original) The apparatus of claim 4 and further including means for selectively and individually electronically measuring the distance from each of said end portions to said central axis by connecting said end portions to a conducting pin which is insulated from ground potential.

6. (original) Apparatus for cutting and stripping an outer, covering layer of material from an elongated workpiece having a central axis, said apparatus comprising:

- a) a fixed frame;
- b) means for supporting said workpiece upon said frame with said central axis extending along a predetermined axis;
- c) first and second carriages mounted for reciprocal movement upon said frame in a direction parallel to said predetermined axis;
- d) first and second stepper motors having first and second nuts, respectively, rotatable in response to actuation of the associated stepper motor;
- e) a single, elongated, lead screw extending through both of said first and second nuts;
- f) a single blade with an opening surrounded by a circular cutting edge;

g) motive means for moving said blade to impart orbital movement to said cutting edge about said predetermined axis;

h) means for mounting said first motor upon said frame and said second motor upon said first carriage and for attaching said second motor to said second carriage to effect joint and relative movement, respectively, of said first and second carriages in response to actuation of said first and second motors, respectively.

7. (original) The apparatus of claim 6 and further including a movable member mounted upon said second carriage and connected to said blade for imparting said orbital movement to said cutting edge.

8. (original) The apparatus of claim 7 wherein said motive means comprises a drive motor mounted upon said first carriage for imparting orbital movement to said movable member, the radius of said orbital movement being a function of the distance between said first and second carriages, as adjusted by said relative movement of said first and second carriages.

9. (original) The apparatus of claim 8 wherein said movable member is movable in a plane perpendicular to said predetermined axis.

10. (original) The apparatus of claim 6 wherein both of said first and second carriages are mounted for movement upon single, linear ways fixedly attached to said frame.

11. (original) The apparatus of claim 6 and further including a pair of gripping members jointly movable toward and away from said predetermined axis at a position closely adjacent said cutting edge to engage said covering layer prior to joint movement of said carriages to effect said stripping of said covering layer.

12. (original) Apparatus for cutting and stripping a portion of a covering layer of preselected axial length from a terminal end of a filamentary workpiece, having a first diameter, said apparatus comprising:

- a) clamping jaws for engaging said workpiece at a position spaced from said preselected axial length to fix the axial position of said workpiece;
- b) blade means movable to cut through said covering layer at said preselected axial length from said terminal end;
- c) a guide bushing having a cylindrical passageway with a linear, central axis, forward and rear ends and a second diameter larger than said first diameter by a distance large enough to permit free axial insertion and removal of said cable and small enough to substantially maintain an inserted workpiece coaxial with said linear axis;
- d) support means for holding said bushing with said forward end closely adjacent said preselected axial length and with said linear axis in a desired radial position;
- e) adjustment means for selectively adjusting said desired position; and
- f) a motor for imparting movement to said blade means.

13. (original) Apparatus according to claim 12 wherein said adjustment means comprise first and second members selectively movable to move said bushing, and thus said

linear axis, in horizontal and vertical directions, respectively, in a plane perpendicular to said linear axis.

14. (original) Apparatus according to claim 13 wherein said first and second members comprise first and second threaded screws, respectively, engaged in threaded openings in respective support members and rotatable to move axially, thereby moving said linear axis in said horizontal and vertical directions.

15. (original) Apparatus according to claim 14 wherein said support means include a first support member having an opening wherein said bushing is positioned, a second support member wherein said first support member is positioned for vertical, sliding movement, and a third support member upon which said second support member is supported for horizontal, sliding movement in response to rotation of said first screw, said first support member and said bushing being horizontally movable with said second support member.

16. (original) Apparatus according to claim 15 wherein said third support member is an elongated rod passing through an opening in said second support member.

17. (original) Apparatus according to claim 15 wherein said support means further includes a fourth support member movable in response to rotation of said second screw, said first support member, and thus said bushing, being vertically movable in response to movement of said fourth support member.

18. (original) Apparatus according to claim 12 and further including a blade support and first mounting means for attaching said blade means to said blade support, and wherein said support means include second mounting means upon which said bushing is selectively movable between said position wherein said forward end is closely adjacent said preselected axial position, with said bushing essentially blocking direct access to said first mounting means, and an alternate position providing unobstructed access to said first mounting means for removing and replacing said blade means.

19. (original) Apparatus according to claim 18 wherein said support means includes a block upon which said bushing is supported and an elongated, fixed rod extending through a passageway in said block for pivotal movement of said block and said bushing about said rod in moving said bushing between said positions.

20. (original) Apparatus according to claim 19 wherein said support means includes a spring biasing said block toward movement in a first direction upon said rod, and further including a stop defining the limit of said movement in said first direction.

21. (original) Apparatus according to claim 20 wherein said support means further includes a fixed member having an opening, and a shaft fixedly mounted to said second mounting means for removable insertion in said opening, and wherein said stop is mounted upon said shaft for contact with said fixed member to define said limit of movement of said block in said first direction.

22. (original) Apparatus according to claim 21 wherein said stop is a collar slidable upon said shaft and axially fixed by a set screw.

23. (currently amended) Apparatus for cutting and stripping portions of a covering layer from a filamentary workpiece having a circular cross section and a central axis, said apparatus comprising:

a) clamping jaws for axially and longitudinally fixing the position of said workpiece:

b) at least one blade having at least one cutting edge for cutting at least partially through said layer;

c) first motive means for moving said at least one blade to cause said cutting edge to cut at least partially through said layer;

d) a pair of members having opposed edge portions on opposite sides of said workpiece;

e) second motive means [for reciprocating movement of said pair of members] comprising first and second linear stepper motors respectively connected to said pair of gripping members for moving said gripping members radially of said workpiece between a first position, wherein said end portions are spaced from one another by a distance greater than the diameter of said workpiece, and a second position, wherein said end portions forcibly engage said covering layer; and

f) third motive means for moving said members axially of said workpiece.

24. (original) The apparatus of claim 23 wherein said at least one blade is moved conjointly with said members by said third motive means.

25. (original) The apparatus of claim 23 wherein said at least one blade is moved by said first motive means to cut at least partially through said layer in a rotary manner, about the entire periphery of said layer.

26. (original) The apparatus of claim 25 wherein said at least one cutting edge comprises a single edge surrounding a circular opening in said at least one blade, said workpiece extends through said opening, and said first motive means moves said at least one blade in an orbiting path about said central axis.

27. (original) The apparatus of claim 23 wherein said edge portions are substantially linear [, sharp] edges positioned in spaced, parallel relation at equal distances on opposite sides of said central axis throughout movement thereof by said second and third motive means.

28. (currently amended) The apparatus of claim 27 and further including means for selective control, between upper and lower limits, of the spacing of said edges [portions] when said members are in said second position.

29. (original) The apparatus of claim 23 and further comprising selectively programmable control means for controlling movement of said first, second and third motive means.

30. (original) The apparatus of claim 29 wherein said control means comprises operator actuated, electronic storage means and a microprocessor.

31. (original) The apparatus of claim 23 wherein said at least one blade is positioned between said clamping jaws and said members.

32. (original) The apparatus of claim 31 wherein said cutting edge and said opposed edge portions are positioned closely adjacent one another.